formed on the top surface **12***a* of the base substrate **12** and a lower guard pattern **62***g*-**2** formed on the bottom surface **12***b* of the base substrate **12**.

[0212] For example, more stress caused by fatigue may be applied to the top surface **12***a* of the base substrate **12** than to the bottom surface **12***b* of the base substrate **12** when the electronic apparatus **1***a* is repeatedly bent during use as described above with reference to FIG. **19**. Accordingly, a width W**6***a* of the upper guard pattern **62***g*-**1** may be greater than a width W**6***b* of the lower guard pattern **62***g*-**2**.

[0213] FIG. **20**B is a partial enlarged cross-sectional view of a PCB **10**-**8** according to an example embodiment.

[0214] Referring to FIG. **20**B, the PCB **10**-**8** includes the base substrate **12** including the opening **60***h*. A guard pattern **62***h* may be formed along a boundary of the opening **60***h* on the base substrate **12**. The guard pattern **62***h* may have a substantially constant width along the boundary of the opening **60***h*. The guard pattern **62***h* may include an upper guard pattern **62***h*-**1** formed on the top surface **12***a* of the base substrate **12**, a lower guard pattern **62***h*-**3** formed on the bottom surface **12***b* of the base substrate **12**, and a buried guard pattern **62***h*-**2** formed in the base substrate **12**.

[0215] A width W**7***a* of the upper guard pattern **62***h*-**1** may be greater than a width W**7***c* of the lower guard pattern **62***h*-**3**, and a width W**7***b* of the buried guard pattern **62***h*-**2** may be less than the width W**7***a* of the upper guard pattern **62***h*-**1** and may be greater than the width W**7***c* of the lower guard pattern **62***h*-**3**.

[0216] FIG. **21** is a block diagram illustrating a configuration of a system **1000** according to an example embodiment.

[0217] Referring to FIG. **21**, the system **1000** includes a controller **1010**, an input/output device **1020**, a memory device **1030**, and an interface **1040**. The system **1000** may be a wearable device. In an example embodiment, the wearable device may be a watch-type wearable device, a wristband-type wearable device, or a glasses-type wearable device. The controller **1010** for controlling an executive program in the system **1000** may include a microprocessor, a digital signal processor, a microcontroller, or the like. The input/output device **1020** may be used to input or output data of the system **1000**. The system **1000** may be connected to an external apparatus, for example, a PC or a network, by using the input/output device **1020**, and may exchange data with the external apparatus. The input/output device **1020** may be or include, for example, a keypad, a button, a sound device, or a display device. The memory device **1030** may store code and/or data for operating the controller **1010**, or may store data processed by the controller **1010**.

[0218] The interface **1040** may be a path through which data is transmitted between the system **1000** and the external apparatus. The controller **1010**, the input/output device **1020**, the memory device **1030**, and the interface **1040** may communicate with one another via a bus **1050**.

[0219] The system **1000** may include at least one of the PCBs of FIGS. **1** through **20**B.

[0220] FIG. **22** is a cross-sectional view of an electronic apparatus **2000** according to an example embodiment. In FIG. **22**, the electronic apparatus **2000** including a PCB may be or include, for example, a wristband.

[0221] Referring to FIG. **22**, the electronic apparatus **2000** includes a PCB **2010** and a device **2100** mounted on the PCB **2010**. The PCB **2010** may be at least one of the PCBs of FIGS. **1** through **20**B. The device **2100** may be an electrical/electronic component used to drive the electronic apparatus **2000**. The electronic apparatus **2000** may include an upper body **2410**, a lower body **2420**, and a cover **2300**. The cover **2300** may cover a surface of the electronic apparatus **2000** in order to protect elements included in the electronic apparatus **2000**.

[0222] The upper body **2410** and the lower body **2420** may be used to maintain a main shape of the electronic apparatus **2000**. Alternatively, an input/output device of the electronic apparatus **2000** may be disposed on the upper body **2410**. A sensor may be disposed on the lower body **2420**.

[0223] The device **2100** that is relatively important to drive the electronic apparatus **2000** may be disposed between the upper body **2410** and the lower body **2420**. Although a portion of the PCB **2010** disposed between the upper body **2410** and the lower body **2420** is curved, the portion may be substantially prevented from being bent because deformation is limited by the upper body **2410** and the lower body **2420**. That is, the portion of the PCB **2010** disposed between the upper body **2410** and the lower body **2420** may be the mounting region DR of FIGS. **1** through **20**B.

[0224] A portion of the electronic apparatus **2000** that is adjacent to the upper body **2410** and the lower body **2420** may be the bending region BR that is repeatedly bent in order to attach or detach the electronic apparatus **2000**.

[0225] A PCB according to the inventive concepts may substantially prevent cracks from occurring or a connection line from being shorted due to stress caused by fatigue when an electronic apparatus including the PCB is repeatedly bent.

[0226] Accordingly, the reliability of the electronic apparatus including the PCB may be guaranteed.

[0227] While the inventive concepts has been particularly shown and described with reference to embodiments thereof, it will be understood that various changes in form and details may be made therein without departing from the spirit and scope of the following claims.

1. A printed circuit board (PCB) comprising:

a base substrate having a first edge and a second edge on opposite sides of the base substrate, the base substrate having a bending region including an opening adjacent to the first edge, an opening adjacent to the second edge, and mounting regions extending from opposite ends of the bending region and including device mounting portions;

a connection line on the base substrate and crossing the bending region, the connection line being configured to connect the device mounting portions; and a guard pattern on at least one of a top surface and a bottom surface of the base substrate along a boundary of at least one of the openings.

2. The PCB of claim **1**, wherein the opening adjacent to the first edge and the opening adjacent to the second edge face each other.

3.-**4**. (canceled)

5. The PCB of claim **1**, wherein at least one of the openings is a through-hole in the base substrate.

6.-**7**. (canceled)

8. The PCB of claim **1**, wherein the opening adjacent to the first edge is recessed from the first edge of the base substrate, and the opening adjacent to the second edge is recessed from the second edge of the base substrate.

9. (canceled)